

REMARKS

Applicants acknowledge receipt of the Examiner's Final Office Action dated July 23, 2008.

Rejection of Claims under 35 U.S.C. §102 and §103

Claims 1, 4, 6, 8-10, 12, 15-17 and 19-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Blea *et al.*, U.S. Patent No. 6,212,531 (*Blea*). Claims 2, 3, 5, 11, 13, 14, 16 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Blea* in view of Berg, U.S. Patent No. 6,222,558 (*Berg*).

Applicants respectfully traverse each of these rejections. Applicants respectfully submit that the argument presented below with respect to independent Claim 1 is generally applicable to Claims 2-6, 8-17, and 18-22, as independent Claims 6, 12, and 17 are generally rejected under the same logic employed against Claim 1, and Claims 2-5, 8-11, 13-16, and 19-22 depend from respective allowable independent claims, and are therefore allowable. Exemplary Claim 1 recites:

A method comprising:

- creating a first storage object, wherein creating the first storage object comprises a computer system creating a first storage object description, wherein the first storage object description comprises data that relates the first storage object to first underlying storage objects or to first physical memory regions;
- creating a second storage object as a virtual snapshot copy of the first storage object, wherein creating the second storage object comprises the computer system creating a second storage object description, **wherein the second storage object description comprises data identifying the second storage object as a snapshot copy of the first storage object;**
- adding to the first storage object description data identifying the second storage object as a snapshot copy of the first storage object;**
- the computer system transmitting the first storage object description to a first computer system, and;
- the computer system transmitting the second storage object description to a second computer system.**

For the purposes of addressing the rejections asserted by the present Final Office Action, Applicants respectfully submit that independent Claims 6, 12, and 17 are rejected under logic materially similar to that logic employed against Claim 1.

Applicants respectfully submit that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, the identical invention must be shown in as complete detail as is contained in the . . . claim.” See *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicants respectfully submit that *Blea* does not anticipate independent Claim 1, because certain elements, specifically recited in Claim 1, are absent from *Blea*. Generally speaking, the Final Office Action argues a faulty mapping of elements that makes it impossible for the Final Office Action to argue a *prima facie* case of anticipation.

Specifically, independent claim 1 recites “creating a first storage object description, wherein the first storage object description comprises data that relates the first storage object to first underlying storage objects or to first physical memory regions.” The Final Office Action refers (Final Office Action of July 23, 2008 (“FOA”) p. 3, ¶1) to Figure 2A stating:

wherein the first storage object description comprises data that relates the first storage object [**“Pointers 36” for “Virtual Volume A 32, Figure 2A]** to first underlying storage objects or to first physical storage memory regions [**“RAID 18”, Figure 2A]**’,

See FOA, p.3, ¶1. From this quotation, the Final Office Action establishes a mapping between the claimed first storage object and Virtual Volume A 32 and a mapping between first underlying

storage objects and RAID 18. The Final Office Action further identifies Pointers 36 as purportedly teaching a first storage object description.

In the next paragraph, the Final Office Action establishes an incomplete and logically inconsistent mapping. Independent Claim 1 recites “creating a second storage object as a virtual snapshot copy of the first storage object, wherein creating the second storage object comprises the computer system creating a second storage object description, **wherein the second storage object description comprises data identifying the second storage object as a snapshot copy of the first storage object.**” The Final Office Action refers (p. 3, ¶2) to Figure 2B stating:

creating a second storage object [**“Virtual Volume B 34”, Figure 2B**] as a virtual snapshot copy of the first storage object, wherein creating the second storage object comprises the computer system creating a second storage object description, *wherein the second storage object description comprises data identifying the second storage object [**“Raid 18” Figure 2B**] as a snapshot copy [**“snapshot copy”, Column 2, lines 26-29**] of the first storage object [**“Virtual Volume A 32”, Figure 2B**].*

See FOA, p.3, ¶2 (emphasis added). From this quotation, the Final Office Action establishes (1) a mapping between the claimed second storage object and RAID 18, and (2) a mapping between claimed second storage object and Virtual Volume B 34. It is also noted above that the Final Office Action maps the claimed first underlying storage objects to RAID 18. Thus, the Final Office Action establishes (1) a mapping between the claimed first underlying storage objects and RAID 18, and (2) a mapping between the claimed second storage object and RAID 18. Logically fatal inconsistencies are exposed.

For RAID 18 to teach simultaneously both the recited first underlying storage objects and the recited second storage object requires that no distinction exist between the recited first underlying storage objects and the recited second storage object. Alternatively, the single second storage object is said to be two separate things, both RAID 18 and Virtual Volume B 34. Such a

confused mapping impermissibly eliminates from Claim 1, at the very least, the recited distinction between the first underlying storage objects and the second storage object. Applicants respectfully remind the Examiner that “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *See* MPEP 2143.03 citing *In re Wilson* 424 F.2d 1382, 165 USPQ 494, 496 (CCPA 1970).

The mapping becomes yet muddier in the third paragraph. Independent Claim 1 recites “adding to the first storage object description data identifying the second storage object as a snapshot copy of the first storage object.” The Final Office Action refers, at p. 3, ¶3, to Figure 2B, stating:

adding to the first storage object description data identifying the second storage object [**“Pointers 38” directing to the underlying “RAID 18” of “Virtual Volume A 32”, Figure 2B**] as a snapshot copy of the first storage object [**Virtual Volume A 34, Figure 2B**]

See FOA, p.3, ¶3. The cited arrow (labeled Pointers 38) points to a relationship between Virtual Volume B 34 and “the underlying” RAID 18, while the language of the claim describes a relationship between the second storage object and the first storage object, not the underlying storage objects. Clearly, the structural difference between that which is claimed and that which purportedly taught by *Blea* necessitates that *Blea* does not anticipate Applicants’ Claim 1.

Applicants noted the previous Office Action failed to establish a prima facie case of anticipation, because the previous Office Action failed to point to any structure in Figure 2B as teaching the recited second storage object description. The Final Office Action responded by selecting Pointers 38 as providing a second storage object description, making the mapping proposed by the Final Office Action even more inconsistent.

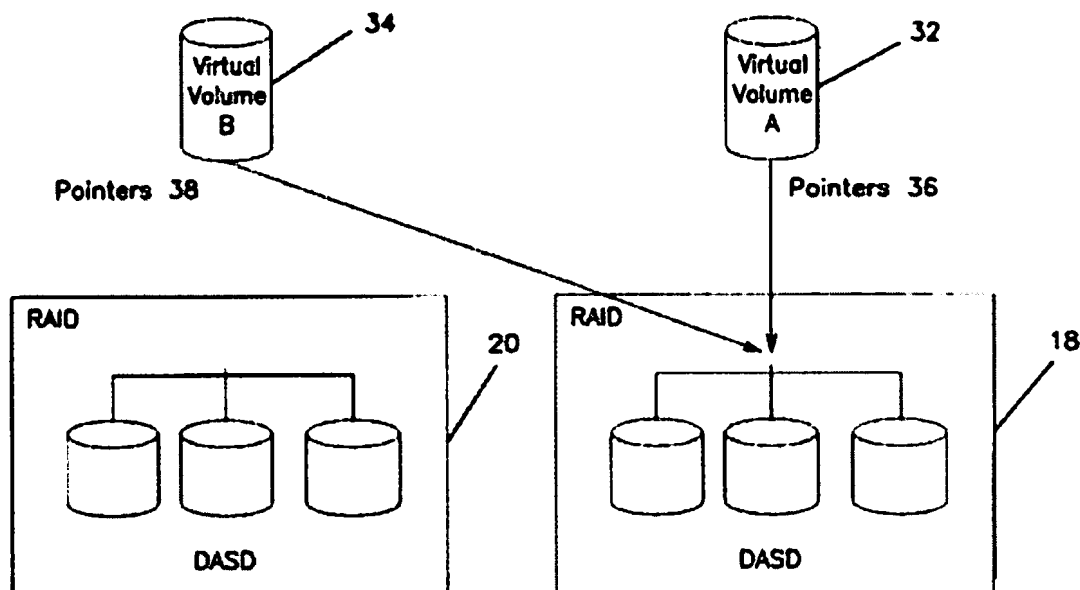
The Examiner has courteously attempted to answer this argument in the Final Office

Action, stating:

Regarding Claim 1, the applicant argues that the cited prior art fails to teach the second storage object description comprising “data identifying the second storage object as a snapshot copy of the first storage object.” Specifically, the applicant argues that the cited prior art does not make a distinction between the “first storage object” and the “second storage object”. However, Blea clearly teaches a “virtual volume A 32” and a “virtual volume B34” in Figure 2B, which correspond to the “first storage object” and the “second storage object” respectively. Further, the examiner reminds the applicant that the examiner has never selected Pointers 36 as providing a second storage object description as the applicant states on page 10 of the “Remarks”. Blea maintains a relationship that treats the “virtual volume B34 as a snapshot copy of the “virtual volume A 32” in column 2, Lines 26-29, and such relationship being maintained within the system is interpreted as the “second storage object description”, wherein the Pointers 38 (Figure 2B) directs to the “second storage object”.

See FOA, p.6, ¶3. Applicants respectfully submit that the response iterates the underlying error in the mapping proposed by the Final Office Action. As stated above, the Final Office Action maintains that “Blea maintains a relationship that treats the ‘virtual volume B34’ as a snapshot copy of the ‘virtual volume A 32’... [and] the ‘second storage object description’, wherein the Pointers 38 (Figure 2B) directs to the ‘second storage object.’” As a result of this faulty mapping, *Blea* cannot anticipate Applicants’ amended Claim 1. The Final Office Action establishes a mapping between “Pointers 38” and the limitation reciting that “the second storage object description comprises data identifying the second storage object as a snapshot copy of the first storage object.” Simply stated, Pointers 38 do not identify a relationship between virtual volume B 34 (which the Final Office Action maps to “the second storage object”) and virtual volume A 32 (which the Final Office Action maps to “the first storage object”). Instead, Pointers 38 describe a relationship between virtual volume B 34 and RAID 18 (which the Final Office Action maps to the claimed first underlying storage objects).

This inconsistent mapping is exposed by Figure 2B:



Blea, FIG. 2B. Rather than illustrating the claimed, “the second storage object description comprises data identifying the second storage object as a snapshot copy of the first storage object,” FIG. 2B illustrates that Pointers 38 are a line between RAID 18 (which the Final Office Action maps in one instance to the claimed first underlying storage objects) and virtual volume B 34 (which the Final Office Action maps to “the second storage object”).

Further, the cited text does not alleviate the deficiency of this mapping. The Final Office Action cites to column 2, Lines 26-29, which merely state that “Workspace on a work virtual volume is obtained to hold the snapshot copy of the source data being copied from a virtual volume.” This text does not resolve the underlying failure of *Blea* to teach, or even fairly suggest, the recited “the second storage object description comprises data identifying the second storage object as a snapshot copy of the first storage object.”

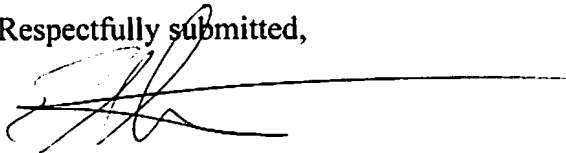
For at least these reasons, Applicants respectfully submit that *Blea* does not anticipate independent Claim 1 or 2-6, 8-17, and 18-22, as independent claims 6, 12, and 17 generally require the same disputed limitations of claim 1, and claims 2-5, 8-11, 13-16, and 19-22 depend from respective independent claims. Applicants therefore respectfully request withdrawal of the present rejections and a notice of allowance with respect to all pending Claims.

CONCLUSION

Applicants submit that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

If any extensions of time under 37 C.F.R. §1.136(a) are required in order for this submission to be considered timely, Applicant hereby petitions for such extensions. Applicant also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. §1.16 or §1.17, be charged to Deposit Account 502306.

Respectfully submitted,



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